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COMPUTER POSTAGE AND MAILING TRACKING LABELS

CROSS REFERENCE TO RELATED APPLICATIONS

This application is related to: co-pending U.S. Patent Application No. 09/975,532, filed October 10, 2001, entitled "SYSTEM AND METHOD FOR PROVIDING COMPUTER-BASED POSTAGE STAMPS," which claims the benefit of U.S. Provisional Application No. 60/239,424, filed Oct. 10, 2000, entitled "A SYSTEM AND METHOD FOR PROVIDING COMPUTER BASED POSTAGE STAMPS"; U.S. Patent Application No. 09/905,329, filed July 13, 2001, entitled "WEB-ENABLED VALUE BEARING ITEM PRINTING"; U.S. Patent Application No. 09/585,025, filed June 1, 2000 and entitled "ON-LINE VALUE BEARING ITEM PRINTING"; and U.S. Patent Application No. 10/197,044, entitled "GENERIC VALUE BEARING ITEM LABELS", filed July 16, 2002, all of which have been, or will be, commonly assigned, the entire contents and disclosures of all of which are hereby incorporated by reference for all purposes as if fully set forth herein.

FIELD OF THE INVENTION

The field of the present invention is labels, and more particularly, a special purpose label arrangement for use with Mail Piece Tracking.

BACKGROUND OF THE INVENTION

CONFIRM® service is a product offered by the United States Postal Service (USPS). U.S. Postal Service *Publication 197* ("*Publication 197*") describes in detail various aspects of the CONFIRM® service and CONFIRM® service interfaces; *Publication 197* is incorporated by reference in full herein for all purposes as if fully stated herein.

CONFIRM® is a mail tracking service of PLANET™ Codes that provides electronic tracking information to USPS customers about their First-Class, Standard letter-size, flat mail and periodicals. CONFIRM® provides advance

delivery information about incoming hard-copy reply mail ("Origin CONFIRM") and outbound mail ("Destination CONFIRM").

In order to track mail, CONFIRM® uses a combination of two tracking numbers: a 5- or 11-digit POSTNET (POStal Numeric Encoding Technique) Code and a 12- or 14-digit PLANET™ Code. The POSTNET and PLANET™ Codes must be encoded as a barcode and applied to the mail piece.

As each mail piece progresses through to its destination, the CONFIRM® barcode on each mail piece is scanned at the different USPS processing facilities through which it passes. Electronic information for each scan is captured and is sent to a centralized network service, which collects the scan data and packages it for use by USPS customers. The electronic scan information is then electronically transferred from the centralized network and is made available in two ways: through accessing a PLANET™ Codes website or via transmission of electronic files sent to subscribing USPS customers.

A POSTNET Code identifies a particular delivery address. A PLANET™ Code identifies a particular CONFIRM® Subscriber's mailing.

The United States Postal Service (USPS) provides the Information Based Indicia Program (IBIP.) The IBIP facilitates PC-based (Personal Computer based) Postage, also sometimes referred to as computer-based, or Internet-based, Postage. With PC Postage, a user can purchase postage credit, and print the postage in the form of PC Postage onto a label or directly onto a mail piece. A PC Postage label provides a human-readable portion and a 2-dimensional barcode portion. The human-readable portion includes the postage value, mail class, the date, and optionally a logo. The barcode portion is intended to help thwart fraud, and includes information about the mail piece including the destination ZIP code, the amount of postage applied, the date and time the postage was applied, and a digital signature so that the USPS can validate the authenticity of the postage.

In one exemplary embodiment of PC Postage, a user subscribes to a third party Internet postage provider, such as, for example, Stamps.com (of Santa

Monica, Calif.), and by using postage software made available by the Internet postage provider, postage value can be downloaded to the user's computer. The user can then print the postage indicia, by an ordinary laser or ink jet printer, directly onto the mail piece itself (e.g., onto business envelopes), onto a label to be applied to the mail piece, or alternately on an insert that can be placed into a window envelope so that it will show through a window envelope. Such postage software preferably works in conjunction with other software programs, such as word processing, accounting, database, and contact management software to allow a user to conveniently print PC Postage at the same time that addressee and bar code information is printed, and, in some cases of envelope printing, at the same time as the sender's return address is printed.

An example of a computer-based postage system is a software-based, online postage system described in U.S. Patent Application No. 09/163,993 filed on Sep. 29, 1998, by Mohan Ananda, entitled "On Line Postage System," the contents of which are hereby incorporated by reference as if set forth in full. The online postage system software comprises user code, also sometimes referred to as client software, that resides on a client system, and controller code, also sometimes referred to as server software, that resides on a server system. An exemplary on-line postage system may comprise a user system electronically connected to a server system, which in turn is connected to a USPS system. The server system is preferably capable of communicating with one or more client systems simultaneously.

In order to facilitate mail handling and optical reading equipment processing of mail by the USPS and to properly interpret PC Postage, addressee information, and CONFIRM® tracking information, postage indicia and related labels need to be applied according to USPS guidelines. USPS guidelines directed to the margins, label sizes, and placement of Postage Indicia, and the size, placement, and other characteristics of POSTNET and PLANET™ bar codes, and any facing identification mark (FIM) on mail pieces are described in the Domestic Mail Manual (DMM) and Title 39, Code of Federal Register (CFR),

Part 111, the contents of which are incorporated by reference in full herein for all purposes.

There are various laser and ink jet printers available for use, such as, for example, in conjunction with computers. Many home, office and small laser and ink jet printers are designed to accept sheets having a maximum width of 21.59 cm (8.5 inches), or in the case of wide format printers, about 27.94 cm (11 inches.) However, because many home and office printers are of the 21.59 cm (8.5 inches) variety, many self-adhesive label sheets have a width of 21.59 cm (8.5 inches) or less.

A label arrangement is needed for use with computer-based Postage systems and computer printer printable labels for use with computer-based Postage systems to facilitate Mail Piece Tracking. Further, a method is needed for printing a special purpose label arrangement that has a label portion adapted to be printed with postage indicia, a label portion adapted to be printed with a first one-dimensional barcode representing mailing identification information, in some embodiments, a second one-dimensional barcode representing delivery address information, and in some embodiments, a label portion adapted to be printed with a delivery address.

SUMMARY OF THE INVENTION

The present invention provides special purpose label arrangement sets for use with computer-based postage systems to facilitate mailing tracking, and sheets of such label arrangement sets, and methods for printing such label arrangement sets.

A first exemplary embodiment of the present invention provides a computer printer printable self-adhesive label set for use with a computer postage system, the label set comprising: a postage indicia label, wherein the postage indicia label is adapted to be printed with postage indicia; and an addressee label, wherein the addressee label is adapted to be printed with a delivery address, a first graphic symbology, such as a first barcode, representing

mailing identification information, and a second graphic symbology, such as a second barcode, representing delivery address information.

One exemplary embodiment of the present invention provides a sheet of a plurality of computer printer printable self-adhesive label sets for use with a computer postage system, the sheet comprising: at least one self-adhesive label arrangement set, wherein each label arrangement set comprising: a postage indicia label, wherein the postage indicia label is adapted to be printed with postage indicia; and an addressee label, wherein the addressee label is adapted to be printed with a delivery address, a first graphic symbology, such as a first barcode, representing mailing identification information, and a second graphic symbology, such as a second barcode, representing delivery address information.

A second exemplary embodiment of the present invention provides a computer printer printable self-adhesive label set for use with a computer postage system, the label set comprising: a postage indicia label, wherein the postage indicia label is adapted to be printed with postage indicia; a first barcode label, wherein the first barcode label is adapted to be printed with a first graphic symbology, such as a first barcode, representing either mailing identification information or delivery address information. In the second exemplary embodiment, a second barcode label is provided wherein the second barcode label is adapted to be printed with a second graphic symbology, such as a second barcode, representing the other of either mailing identification information or delivery address information.

One exemplary embodiment of the present invention provides a sheet of a plurality of computer printer printable self-adhesive label sets for use with a computer postage system, the sheet comprising: at least one self-adhesive label arrangement set, wherein each label arrangement set comprising: a postage indicia label, wherein the postage indicia label is adapted to be printed with postage indicia; and a first barcode label, wherein the first barcode label is

adapted to be printed with a first graphic symbology, such as a first barcode, representing mailing identification information.

One exemplary embodiment of the present invention provides a method for printing postage indicia and mail piece tracking information onto a single sheet of self-adhesive labels containing at least one self-adhesive label arrangement set, the method comprising: directing a computer postage system to print postage indicia on a postage indicia label of one of the self-adhesive label arrangement sets; and directing the computer postage system to print a first graphic symbology, such as a first barcode, representing mail piece tracking information on a first barcode label of the self-adhesive label arrangement set.

Another exemplary embodiment of the present invention provides a method for printing postage indicia and mailing tracking information onto a label arrangement set on a single sheet of self-adhesive labels, the method comprising: directing a computer postage system to print postage indicia on a first label of the label arrangement set wherein the first label of the label arrangement set is adapted to be printed with postage indicia; and directing the computer postage system to print a first graphic symbology on a second label of the label arrangement set, wherein the first graphic symbology represents mailing tracking information and wherein the second label of the label arrangement set is adapted to be printed with at least one graphic symbology representing mailing tracking information.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other features, aspects, and advantages of the present invention will become better understood with regard to the following description, appended claims, and accompanying drawings in which:

FIG. 1 is a plan view of a first exemplary computer printer printable self-adhesive label arrangement set for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 2 is a plan view of a first alternative configuration of the first exemplary computer printer printable self-adhesive label arrangement set for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 3A is a plan view of an exemplary sheet of a plurality of first exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 3B is a plan view of a sheet on which is disposed a plurality of an alternative configuration of first exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 3C is a plan view of a sheet on which is disposed a plurality of further alternative configuration of first exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 4 is a plan view of a further alternative configuration of first exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 5 is a plan view of another alternative configuration of first exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 6 is a plan view of a sheet on which is disposed a plurality of another alternative configuration of first exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 7A is a plan view of a second exemplary computer printer printable self-adhesive label arrangement set for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 7B is a plan view of an exemplary sheet of a plurality of an alternative configuration of second exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 7C is a plan view of a sheet of a plurality of a further alternative configuration of second exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention;

FIGS. 8 through 11 are plan views of various alternative configurations of a second exemplary computer printer printable self-adhesive label arrangement set for use with a computer postage system in an exemplary embodiment of the present invention;

FIGS. 12 through 16 are plan views of various alternative configurations of a third exemplary computer printer printable self-adhesive label arrangement set for use with a computer postage system in an exemplary embodiment of the present invention;

FIG. 17 is a plan view of a sheet of a plurality of an alternative configuration of third exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention; and

FIG. 18 is a plan view of a sheet of a plurality of a further alternative configuration of third exemplary computer printer printable self-adhesive label arrangement sets for use with a computer postage system in an exemplary embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 is a plan view of a first exemplary computer printer printable self-adhesive label arrangement set 12 for use with a computer postage system in an exemplary embodiment of the present invention. As depicted in FIG. 1, each first

exemplary label arrangement set 12 includes a first label 14 and a second label 16.

As depicted in FIG. 1, first label 14 of the first exemplary computer printer printable self-adhesive label arrangement set 12 is to the left of second label 16. It will be understood by someone with ordinary skill in the art that in an alternative embodiment, the order of first label 14 and second label 16 could be reversed, such as is depicted in FIG. 2, so that first label 14 of label arrangement set 12' is to the right of second label 16.

In the first exemplary computer printer printable self-adhesive label arrangement set 12 as depicted in FIG. 1, the first label 14 is a postage indicia label. Postage indicia label 14 has a top edge 14a, a bottom edge 14b, a right edge 14c, and a left edge 14d. Postage indicia label 14 has a width 18 and a height 20. In the first exemplary embodiment, width 18 measures approximately 1.25 inches; height 20 measures approximately 1.75 inches. Postage indicia label 14 is adapted to be printed with postage indicia. Postage indicia label 14 provides three sections 31, 32, and 33.

It will be understood by someone with ordinary skill in the art that the measurements given herein of exemplary labels are themselves illustrative and non-limiting; other dimensions could be used without departing from the spirit of the invention.

When the first exemplary computer printer printable self-adhesive label arrangement set 12 depicted in FIG. 1 is used for printing postage indicia on secured labels wherein each postage indicia label has a pre-assigned serial number, a serial number may be printed on the label stock at the time the postage indicia is printed; the at-print-time serial number would be printed as a record of the printing.

Depending on the configuration of a plurality of label arrangement set 12, the serial number would typically be printed on the label stock that is not part of the postage indicia label or other label in the label arrangement set 12, either above, below or to the side of the postage indicia label 14. In some cases,

depending on the configuration of the plurality of label arrangement set 12, the serial number may be printed according to an orientation that differs from the orientation of the postage indicia label 14. For example, in FIG. 3A, spaces 113-1, 113-2 and 113-3 would be adapted for printing a serial number record in landscape orientation as compared to the postage indicia labels 14-1, 14-2 and 14-3 which would be adapted for printing postage indicia in a portrait orientation.

It will be understood by someone with ordinary skill in the art that placement of space reservation for serial number record printing can be varied without departing from the spirit of the invention.

Returning with reference to FIG. 1, postage indicia label section 31 (below line 19-19 and to the right of line 21-21) is adapted to be printed with a two-dimensional postage indicia barcode. In an exemplary postage indicia label embodiment, an exemplary two-dimensional postage indicia barcode comprises information about the mail piece such as, for example, the destination ZIP code, the amount of postage applied, the date and time the postage was applied, and a digital signature so that the USPS can validate the authenticity of the postage.

It will be understood by someone with ordinary skill in the art that the description herein of embodiments of the invention regarding one-dimensional and two-dimensional barcodes is non-limiting and illustrative; one-dimensional and two-dimensional barcodes are exemplary graphic symbologies; graphic symbologies other than those described herein could be used with the invention. As a further non-limiting example, embodiments herein describing a one-dimensional barcode representing mailing identification information could use instead a two-dimensional graphic symbology to represent mailing information without departing form the spirit of the invention. It will be understood by someone with ordinary skill in the art that the terms "barcode" and "bar code" are sometimes used, as those terms are used herein, in a general sense as referring to graphic symbologies in bar, matrix, or various other forms. The terms barcode, bar code and graphic symbology (in the singular or plural) are used interchangeably herein.

Postage indicia label section 32 (to the left of line 21-21) is adapted to be printed with a serial number. In an exemplary postage indicia label embodiment, an exemplary serial number is printable in a landscape orientation.

Postage indicia label section 33 (above line 19-19 and to the right of line 21-21) is adapted to be printed with a human-readable portion. In an exemplary postage indicia label embodiment, an exemplary human-readable portion comprises a human-readable postage value, a human-readable mail class, a human-readable date, and optionally a visual logo.

The second label 16 is an addressee label. Addressee label 16 has a top edge 16a, a bottom edge 16b, a right edge 16c and a left edge 16d. In an exemplary addressee label embodiment, the left edge 16d of addressee label 16 is separated from the right edge 14c of postage indicia label 14 by a width 38 measuring approximately 1/8 inch. It will be understood by someone with ordinary skill in the art that, in alternative embodiments, the two labels 14 and 16 could abut each other; a single micro-perforated line separating the two labels 14 and 16 from each other.

The addressee label 16 is adapted to be printed with a human-readable delivery address, a first one-dimensional barcode representing mailing identification information, and a second one-dimensional barcode representing delivery address information. Addressee label 16 has a width 22 and a height 24. In the first exemplary embodiment, width 22 measures approximately 4 inches; height 24 measures approximately 1.75 inches. The addressee label 16 provides three sections 35, 36, and 37.

The first addressee label section 35, which is below line 17-17, is adapted for printing a one-dimensional barcode comprising one of a one-dimensional barcode representing mailing identification information, such as a one-dimensional barcode representation of a PLANET™ code, or a one-dimensional barcode representing delivery address information, such as a one-dimensional barcode representation of a POSTNET code. First addressee label section 35

has a height 30. In the first exemplary computer printer printable self-adhesive label arrangement set 12, height 30 measures approximately 0.3 inch.

The second addressee label section 36, which is above line 15-15, is adapted for printing a one-dimensional barcode comprising the other of a one-dimensional barcode representation of a PLANET™ code or a one-dimensional barcode representation of a POSTNET code. Second addressee label section 36 has a height 26. In the first exemplary computer printer printable self-adhesive label arrangement set 12, height 26 measures approximately 0.3 inch.

The third addressee label section 37, which is above line 17-17, and below line 15-15, is adapted for printing a human-readable delivery address. Third addressee label section 37 has a height 28. In the first exemplary computer printer printable self-adhesive label arrangement set 12, height 28 measures approximately 1.15 inches.

As will be understood by someone with ordinary skill in the art, dashed lines such as 15-15, 17-17, 19-19, and 21-21 are depicted in the drawings here but are not evident on the actual labels.

In an alternative embodiment, no postage indicia label is provided, only a delivery address label 16 would be provided, and would be adapted to be printed with a human-readable delivery address, a first one-dimensional barcode representing mailing identification information, and a second one-dimensional barcode representing delivery address information as described above.

As will be understood by someone with ordinary skill in the art, a plurality of the first exemplary computer printer printable self-adhesive label arrangement set 12 depicted in FIG. 1 may be arranged in various possible ways on a sheet of arrangement sets. An exemplary sheet 100 comprising a plurality of first exemplary computer printer printable self-adhesive label arrangement sets 12-1 through 12-3 is depicted in FIG. 3A. Exemplary sheet 100 has a width 111 that measures 8.5 inches and a height 112 that measures 11 inches.

The construction of a sheet 100 of self-adhesive labels is conventional in that sheet 100 provides a top printable layer 141. On the back 142 of the top

printable layer 141, adhesive material is provided covering the entire back 142. Exemplary sheet 100 further provides a backing sheet 140 with low adhesion. The low adhesion of backing sheet 140 facilitates removal of a set, e.g., set 12-1 of labels 14-1 and 16-1 from sheet 100 so that the labels 14-1 and 16-1 can then be permanently attached to a mailing piece (not shown).

Each label, e.g., 14-1 and 16-1, provide a corresponding perimeter, 101-1 and 102-1, respectively. As will be understood by someone with ordinary skill in the art, the perimeter, e.g., 101-1 and 102-1, of each label, 14-1 and 16-1, respectively, is formed, such as by, e.g., micro-perforations, that pierce the top printable layer 141, but not the backing sheet 140.

Label sets 12, and 12-1 through 12-3, depicted in FIGS. 1 through 3A are depicted in portrait orientation respective to the sections adapted to be printed with human readable text, such as postage indicia label section 33 and delivery address label section 37. It will be understood by someone with ordinary skill in the art that landscape orientation of the label sets 12" and 12"', such as depicted in FIGS. 4 and 5, respectively, are also possible. FIG. 6 depicts an exemplary alternative arrangement of label sets 12-1" through 12-6" in which each label set 12-1" through 12-6" is provided in landscape orientation respective to the sections adapted to be printed with human readable text, such as postage indicia label section 33 and delivery address label section 37. FIGS. 3B and 3C depict plan views of further alternative arrangement label sets 12"" and 12""', respectively. In alternative arrangement label sets 12"" and 12""', postage indicia labels, e.g., 14-1, are adapted to be printed in landscape orientation relative to portrait orientation of delivery address labels, e.g., 16-1. In alternative arrangement label set 12"" depicted in FIG. 3B, postage indicia label, e.g., 14-6, with reference to portrait orientation of sheet 100, is provided above delivery address label, e.g., 16-6, of the set. In alternative arrangement label set 12""' depicted in FIG. 3C, postage indicia label, e.g., 14-6, with reference to portrait orientation of sheet 100, is provided below delivery address label, e.g., 16-6, of the set.

In one exemplary embodiment of the present invention, a method for printing postage indicia and mail piece tracking information onto a single sheet of self-adhesive labels containing at least one self-adhesive label arrangement set is provided. In the exemplary method, a computer postage system is directed to print postage indicia on a postage indicia label of one of the self-adhesive label arrangement sets. The computer postage system is further directed to print a first one-dimensional barcode representing mail piece tracking information on a first one-dimensional barcode label of the self-adhesive label arrangement set.

In another exemplary embodiment of the present invention, a method is provided for printing postage indicia and mailing tracking information onto a label arrangement set on a single sheet of self-adhesive labels. In this method, a computer postage system is directed to print postage indicia on a first label of the label arrangement set wherein the first label of the label arrangement set is adapted to be printed with postage indicia. The computer postage system is further directed to print a first graphic symbology on a second label of the label arrangement set, wherein the first graphic symbology represents mailing tracking information and wherein the second label of the label arrangement set is adapted to be printed with at least one graphic symbology representing mailing tracking information.

FIG. 7A is a plan view of a second exemplary computer printer printable self-adhesive label arrangement set 112 for use with a computer postage system in an exemplary embodiment of the present invention. As depicted in FIG. 7A, each second exemplary label arrangement set 112 includes a first label 14, a second label 135, and a third label 136. Optionally, label arrangement set 112 could include a fourth label 150.

As depicted in FIG. 7A, first label 14 of the second exemplary computer printer printable self-adhesive label arrangement set 112 is to the left of second and third labels 135 and 136, respectively. It will be understood by someone with ordinary skill in the art that in an alternative embodiment, the order of first label 14 on the one hand, and second and third labels 135 and 136, respectively (and

optionally, fourth label 150) on the other hand, could be reversed, such as is depicted in FIG. 8, so that first label 14 of label arrangement set 112' is to the right of second and third labels 135 and 136 respectively (and optionally, fourth label 150).

In the second exemplary computer printer printable self-adhesive label arrangement set 112 as depicted in FIG. 7A, first label 14 is a postage indicia label. Postage indicia label 14 has a top edge 14a, a bottom edge 14b, a right edge 14c, and a left edge 14d. Postage indicia label 14 depicted in FIG. 7A shares the same features as postage indicia label 14 described above with respect to the first exemplary embodiment and depicted in, e.g., FIG. 1. Accordingly, postage indicia label 14 is not further described with respect to the second exemplary embodiment.

In the second exemplary computer printer printable self-adhesive label arrangement set 112 as depicted in FIG. 7A, second label 135 is a one-dimensional barcode label. One-dimensional barcode label 135 is adapted to be printed with a first one-dimensional barcode representing either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code. One-dimensional barcode label 135 has a top edge 135a, a bottom edge 135b, a right edge 135c, and a left edge 135d. One-dimensional barcode label 135 has a width 222 and a height 130. In the second exemplary embodiment, the width 222 of one-dimensional barcode label 135 measures approximately 2.875 inches; height 130 measures approximately 0.3 inch.

In the second exemplary computer printer printable self-adhesive label arrangement set 112 as depicted in FIG. 7A, third label 136 is a one dimensional barcode label. One-dimensional barcode label 136 is adapted to be printed with a second one-dimensional barcode representing the other of either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code. One-dimensional barcode label 136 has a top edge 136a, a bottom edge 136b, a right edge 136c, and a left edge 136d.

One-dimensional barcode label 136 has a width 222 and a height 126. In the second exemplary embodiment, the width 222 of one-dimensional barcode label 136 measures approximately 2.875 inches; height 126 measures approximately 0.3 inch.

In an exemplary embodiment that includes a return address label 150, optional fourth label 150 is a return address label. Optional return address label 150 is adapted to be printed with a return address representing the return address of the mailer. Optional return address label 150 has a top edge 150a, a bottom edge 150b, a right edge 150c, and a left edge 150d. Optional return address label has a width 152 and a height 151. In an exemplary embodiment that includes a return address label 150, the width 152 of optional return address label 150 measures approximately 2 inches; height 151 measures approximately 1.25 inches.

In the second exemplary computer printer printable self-adhesive label arrangement set 112 as depicted in FIG. 7A, top edge 135a of one-dimensional barcode label 135 is separated from bottom edge 136b of one-dimensional barcode label 136 by an expanse 128 of top printable layer (see element 141 in FIG. 3A); the exemplary expanse 128 depicted in FIG. 7A measures approximately 7/8 inch. In the second exemplary computer printer printable self-adhesive label arrangement set 112 as depicted in FIG. 7A, if optional return address label 150 is provided, it would be provided between one-dimensional barcode label 135 and one-dimensional barcode label 136.

FIG. 7B is a plan view of a sheet 100 of a plurality of exemplary label arrangement sets 112'". Each exemplary label arrangement set 112'" comprises: a postage indicia label, e.g., 14-1, that is adapted to be printed with postage indicia in portrait orientation; a first one-dimensional barcode label, e.g., 135-1, that is adapted to be printed with a first one-dimensional barcode representing either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code in landscape orientation; and a second one-dimensional barcode label, e.g., 136-1, that is adapted to be printed

with a second one-dimensional barcode representing the other of either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code, in landscape orientation; both barcode labels, e.g., 135-1 and 136-1 are provided below the corresponding postage indicia label, e.g., 14-1.

FIG. 7C is a plan view of a sheet 100 of a plurality of exemplary label arrangement sets 112''''. Each exemplary label arrangement set 112'''' comprises: a postage indicia label, e.g., 14-1, that is adapted to be printed with postage indicia in portrait orientation; a first one-dimensional barcode label, e.g., 135-1, that is adapted to be printed with a first one-dimensional barcode representing either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code, in landscape orientation; and a second one-dimensional barcode label, e.g., 136-1, that is adapted to be printed with a second one-dimensional barcode representing the other of either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code, in landscape orientation; both barcode labels, e.g., 135-1 and 136-1 are provided to the right of the corresponding postage indicia label, e.g., 14-1.

It will be understood by someone with ordinary skill in the art that alternative arrangements of one-dimensional barcode label 135, and one-dimensional barcode label 136, such as, but not limited to, those alternative label arrangement sets 112"-1, 112"-2 and 112"-3 depicted in FIGS. 9, 10 and 11, respectively.

In the label arrangement set 112"-1 depicted in FIG. 9, one-dimensional barcode label 135 is separated by an expanse 128' from one-dimensional barcode label 136, where expanse 128' measures only approximately 1/8 inch; top edge 150a of optional return address label 150, if present, would be below bottom edge 135b of one-dimensional barcode label 135.

In the label arrangement set 112"-2 depicted in FIG. 10, bottom edge 150b of optional return address label 150, if present, would be above top edge 136a of one-dimensional barcode label 136.

In the label arrangement set 112"-3 depicted in FIG. 11, top edge 150a of return address label 150 abuts bottom edge 135b of one-dimensional barcode label 135; top edge 135a of one-dimensional barcode label 135 abuts bottom edge 136b of one-dimensional barcode label 136; left edges 150d, 135d, and 136d of labels 150, 135 and 136, respectively, abut right edge 14c of postage indicia label 14.

FIGS. 12 through 16 are a plan views of a third exemplary computer printer printable self-adhesive label arrangement set 212, 212', 212"-1, 212"-2, and 212"', respectively for use with a computer postage system in an exemplary embodiment of the present invention. As depicted in FIGS. 12 through 16, each second exemplary label arrangement set 212 (and 212', 212"-1, 212"-2, and 212"') includes a first label 14, and a second label 136. Optionally, label arrangement set 212 (and 212', 212"-1, 212"-2, and 212"') could include a third label 150.

In the label arrangement sets 212, 212', 212"-1, 212"-2, and 212"' depicted in FIGS. 12 through 16, first label 14 is a postage indicia label. Postage indicia label 14 depicted in FIGS. 12 through 16 shares the same features as postage indicia label 14 described above with respect to the first exemplary embodiment and depicted in, e.g., FIG. 1. Accordingly, postage indicia label 14 is not further described with respect to the third exemplary embodiment.

In the label arrangement sets 212, 212', 212"-1, 212"-2, and 212"' depicted in FIGS. 12 through 16, second label 136 is a one-dimensional barcode label 136. One-dimensional barcode label 136 depicted in FIGS. 12 through 16 shares the same features as one-dimensional barcode label 136 described above with respect to the second exemplary embodiment and depicted in, e.g., FIG. 7A. Accordingly, one-dimensional barcode label 136 is not further described with respect to the third exemplary embodiment.

In the label arrangement sets 212, 212', 212"-1, 212"-2, and 212"' depicted in FIGS. 12 through 16, optional third label 150 is a return address label 150. Return address label 150 depicted in FIGS. 12 through 16 shares the same features as return address label 150 described above with respect to the second exemplary embodiment and depicted in, e.g., FIG. 7A. Accordingly, return address label 150 is not further described with respect to the third exemplary embodiment.

In the label arrangement sets 212, 212', 212"-1, 212"-2, and 212"' depicted in FIGS. 12 through 16, either the top edge 150a of optional return address label 150 faces the bottom edge 14b or bottom edge 150b faces the top edge 14a of postage indicia label 14, as the case may be.

In the label arrangement sets 212, 212', 212"-1, 212"-2, and 212"' depicted in FIGS. 12 through 15, either the top edge 136a of one-dimensional barcode label 136 faces the right edges 14c and 150c of postage indicial label 14 and return address label 150, respectively, or the bottom edge 136b of one-dimensional barcode label 136 faces the left edges 14d and 150d of postage indicial label 14 and return address label 150, respectively, as the case may be. In FIG. 16, top edge 136a of one-dimensional barcode label 136 faces left edges 14d and 150d of postage indicial label 14 and return address label 150, respectively.

The labels provided in label arrangement sets 212, 212', 212"-1, 212"-2, and 212"' depicted in FIGS. 12 through 16, are adapted for printing only a single one-dimensional barcode representing either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code. The orientation of the one-dimensional barcode label 136 is reversed from that of the orientation of the postage indicia label 14 and the return address label 150. For example, in FIGS. 12 through 15, postage indicia label 14 and the return address label 150 are adapted for printing postage indicia and return address respectively in portrait orientation; one-dimensional barcode label 136 is adapted for printing in a landscape orientation, a one-dimensional barcode

representing either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code. In FIG. 16, postage indicia label 14 and the return address label 150 are adapted for printing postage indicia and return address respectively in landscape orientation; one-dimensional barcode label 136 is adapted for printing in portrait orientation, a one-dimensional barcode representing either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code.

As will be understood by someone with ordinary skill in the art, a plurality of label arrangement sets 112 and 212 (and 212', 212"-1, 212"-2, and 212"') can be arranged on sheets in various configurations. For example, FIG. 17 depicts a plan view of an exemplary configuration of a sheet 1000 of a plurality of label arrangement sets 112"-1 (112"-1a through 112"-1i).

FIG. 18 is a plan view of a sheet 1000 of a plurality of exemplary label arrangement sets 212""-1 through 212""-9. Each exemplary label arrangement see, e.g., 212"'-1, comprises: a postage indicia label, e.g., 14-1, that is adapted to be printed with postage indicia in landscape orientation; a first one-dimensional barcode label, e.g., 136-1, that is adapted to be printed with a first one-dimensional barcode representing either mailing identification information, such as a PLANET™ code, or delivery address information, such as a POSTNET code, in landscape orientation; and a return address label, e.g., 150-1, that is adapted to be printed with a return address, in portrait orientation. In each set, e.g., 212""-1, the return address label, e.g., 150-1, is provided below the corresponding postage indicia label, e.g., 14-1; the corresponding one-dimensional barcode label, e.g., 136-1, is provided to the right of the corresponding postage indicia label, e.g., 14-1, and corresponding return address label, e.g., 150-1.

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ILLUSTRATIVE EMBODIMENTS

Although this invention has been described in certain specific embodiments, many additional modifications and variations would be apparent to those skilled in the art. It is, therefore, to be understood that this invention may be practiced otherwise than as specifically described. Moreover, to those skilled in the various arts, the invention itself herein will suggest solutions to other tasks and adaptations for other applications. Thus, the embodiments of the invention described herein should be considered in all respects as illustrative and not restrictive, the scope of the invention to be determined by the appended claims and their equivalents rather than the foregoing description.